

BARKOVIC, D.

Yugoslavia (430)

Technology

Reaction of harmine with bromine. p. 135,
AKHIV ZA KEMIJU, Vol. 20, no. 1-4, 1948.

East European Accessions List, Library of Congress,
Vol. 1, no. 14, Dec. 1952. UNCLASSIFIED.

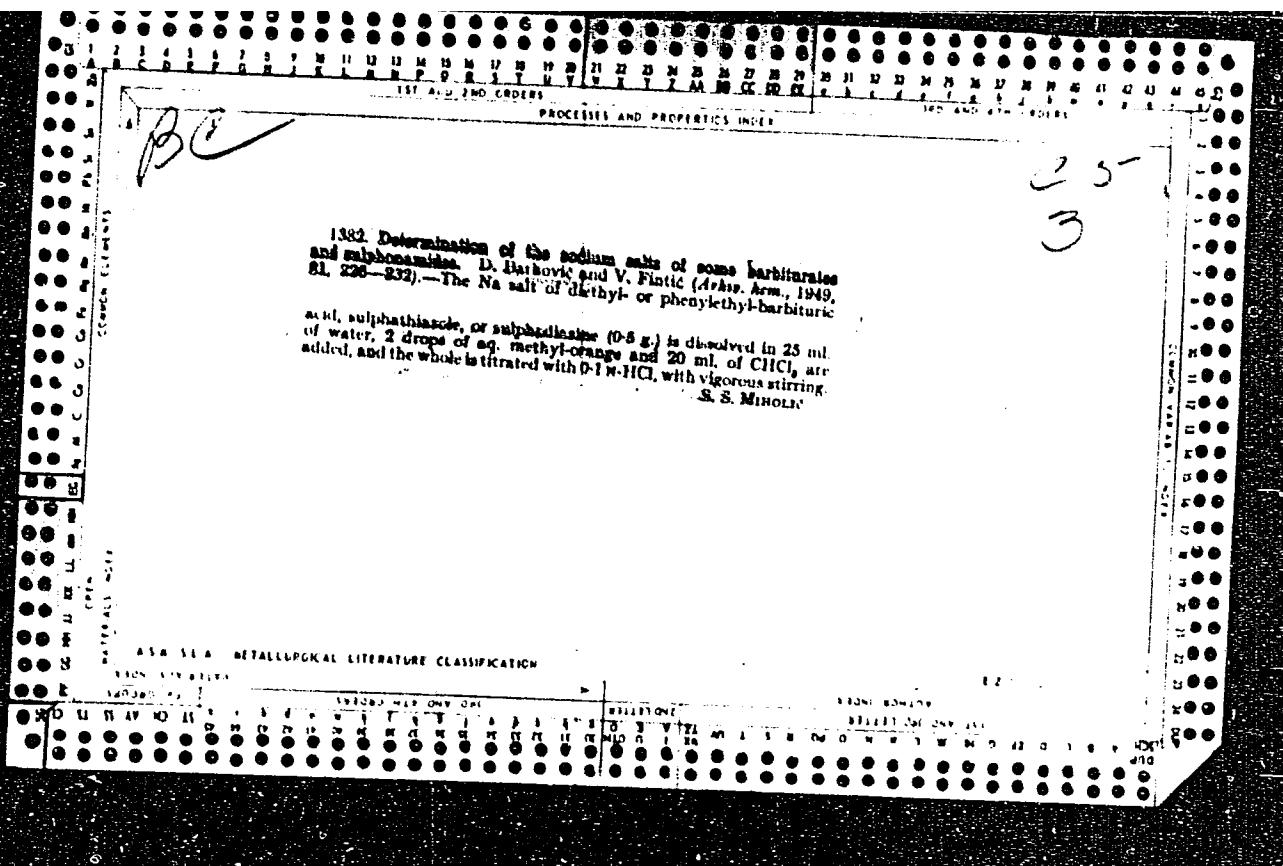
BARKOVIC, D.

Yugoslavia (430)

Technology

Contribution to the quantitative determination of
the sodium salts of some barbiturates and sulphonamides.
p. 225, ARHIV ZA KEMIJU, Vol. 20, no. 1-4, 1949.

East European Accessions List. Library of Congress,
Vol. 1, no. 14, Dec. 1952. UNCLASSIFIED.



17

CA

Quinone-reactions of some *p*-hydroxyquinoline derivatives. I. Identification of quinine and quinidine by means of the quinone-reaction. D. Birković (Farm. fakultet, Zagreb). *Acta Pharm. Jugoslav.* 1, 73-82 (1951) (English summary).—Dissolve 5 mg. of quinine (I) or quinidine (II) salt in 2-3 ml. H₂O or the same amt. of alkaloid base in 2-3 ml. of very dil. AcOH, heat to 60°, add 1-2 drops of 5% AcONa (CaCO₃ or MgO can also be used), then 2 drops of satd. Br water, and mix after 0.5-1 min. A red color (III) is formed which in the presence of NaHCO₃ or excess AcONa is sol. in CHCl₃. Optimal amt. of Br is 2 moles per mole alkaloid; optimal pH of the test soln. is 7-8; the pH of the mixt. should not be less than 4. The sensitivity is approx. equal to that of the Erithroquin reaction (1:10⁴ - 1:2 × 10⁴). On addn. of HCl III turns yellow presumably owing to the formation of a peroxide; this turns red when treated with AcONa. The reduction of the red compd. yields yellow or yellow-green solns. which turn red on oxidation, and which give with FeCl₃ a color reaction similar to that of pyrocatechol. Since *o*-benzoquinone reacts similarly, it is assumed that the red compd. as well as the prod-

ucts of other reactions of I and II with halogens, are 5,6-quinolinedione deriv.; these reactions are therefore called quinone-reactions. On exposing a drop of I or II soln. on filter paper to Br vapor and then to vapor of boiling H₂O a red spot is obtained (cf. *Farm. Glasnik* 3, 216 (1947)). This test is pos. for I or II salt solns. only if the filter paper contains alk. material. 18 references. II. Differentiation of quinine and quinidine on the basis of the quinone reaction. *Ibid.* 91-5; cf. David, *C.A.* 44, 3674b.—(a) The neutral alkaloid soln. is treated to give III but by using only 1 drop of 5% AcONa. After 2-3 min. 3-4 ml. 2 N NaOH is added, and after 1-2 min. the mixt. is shaken with 1-2 ml. CHCl₃. II gives a red or red-violet CHCl₃ layer, I a colorless or slightly colored one. (b) The III soln. is decolorized with Zn, treated with excess NaOH, and shaken with CHCl₃. In the presence of II, CHCl₃ gradually becomes red or violet-red; I gives a colorless or slightly colored CHCl₃ layer. The reason for the different behavior of I and II in these reactions is probably the different stability of the red compds. S. Edmund Berger

CA

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The assay of silver in some organic drugs. D. Darković and M. Movrin (Univ. Zagreb). *Acta Pharm. Jugoslav.* 1, 27-30 (1951) (English summary); cf. *Mauz, C.A.* 40, 4297-27, 30 (1951). In *colloidal Ag* (I): heat a 0.2-g. sample in 15 ml. 50% HNO₃ until most of it dissolves and until the evolution of nitrous gases stops. Add 5 ml. 2% KMnO₄, boil 5-6 min., cool, gradually add FeSO₄ until the ppt. of MnO₂ dissolves, dil with 50-60 ml. H₂O, and titrate with 0.1 N NH₄CNS indicator: FeNH₄(SO₄)₂. In *Ag protein* (II) and in *Targentin* (a diacetylthiann - protein - Ag colloidal complex): same procedure as for I but with a 1-g. sample, 20 ml. 50% HNO₃, and 45 ml. KMnO₄ (immediately add 4-5 ml. more if most of the ppt. dissolves during boiling). In *mild Ag protein*: same procedure as for II with a 0.8-g. sample, 15 ml. 50% HNO₃, 25-30 ml. 2% KMnO₄, and 40-50 ml. H₂O. In *Ag gelatin*: same procedure as for II with a 0.6-g. sample, 15 ml. 50% HNO₃, 30-35 ml. 2% KMnO₄, and 30-40 ml. H₂O. The method is applicable to tablets and solns. of these drugs, the dill. solns. being used without previous evapn.; thus heat a 100-g. sample of 1% *Ag protein soln.* with 10 ml. 65% HNO₃ until the color of the mixt. becomes yellow, add 50 ml. 2% KMnO₄, and proceed as with II. In all cases the results are in excellent agreement with the ones obtained after destroying the org. component by ignition. 17 references. S. Edmund Berger

Mihajlović, D.

3.
⑤
Quinone reactions of some 4-hydroxyquinoline derivatives. III. Quinone reaction and the differentiation reaction for quinine and quinidine with some derivatives of 4-alkoxyquinoline. D. Marković, *Acta Pharm. Jugoslav.*, 2, 69-72(1952)(English summary); cf. C.A. 46, 5262g. Some 4-alkoxyquinoline derivs. related to quinine were examd. for their reaction in differentiating quinine from quinidine. The compds. contg. 4-alkoxyquinoline not substituted in position 8 give a pos. quinone reaction differing only in intensity of the obtained color. V. Mihajlović

BARKOVIC, D.

Reaction of methyl 2-phenylquinonate with bromine
and its product. D. Barkovic and V. Mihajlov. *Acta Polym.*,
Jagodina, 2, 126 (1951) (Czechoslovak summary). A soln. of
1-3 mg. Me 2-phenylquinonate (I) in 3-5 drops Et₂OAc and
1 drop 2N₂HCl dissolved on a piece of filter paper and
then exposed to Br vapor gave a red coloration, used as
proof of the presence of I and for distinguishing I from re-
lated derivs. of quinoline. The reaction product (III), C₁₂
H₁₀O₂NBr.HBr, of I with Br, prep'd. by mixing I with Br
in water in HCl or HBr solution, crystd. from CHCl₃ as red
needles, m. 135-0° (decomp.). V. Mihajlov

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WS

BARKOVIC, D.

(3)

Determination of potassium in sodium salts. Dr. Barkovic and Tomican-Pister (Univ. Zagreb). Farm. Glasnik 9, 327-34 (1953).—The reaction with $\text{Na}_2\text{Co}(\text{NO}_2)_4$ is recommended. The reaction is influenced by various factors: the compn. of the reagent and age of its soln., the degree of stability of the soln. with respect to the influence of light and temp., the pH and the temp. of the reactive mixt., the time of observation and the purity of ethanol if the reaction is carried out in its presence. If the reaction is carried out under the proposed conditions and in presence of EtOH with K_2SO_4 as test, it has proved to be reliable for detg. traces of K salts. If the examd. soln. is alk., it should be carefully acidified with AcOH. If the examd. soln. is acid, NaOAc should be added, and NaOAc should also be added to the standards. The amt. of Na salts as well as the concn. of their soln. are chosen so that purity tests can be carried out with all Na salts in the same way. The permissible amts. of K in Na salts lie between 0.05 and 0.4% according to the purpose of their use.

E. J. Froelich

PARKOVIC, D.

Development of the chemistry of and of the therapy with ergot alkaloids starting with the isolation of ergotamine, D. Parković. *Acta. Acad. Sci. Hung.* 11, 495-501(1955).—A historical review. The prepn. of the most important pharmaceuticals on an ergot base is given, with the names of the ergot alkaloids contained therein. 13 references.

Werner Jacobson

Barković, Dragutin

On

✓ 6-Ethoxyquinoline-4-carboxylic acid and its derivatives.
Dragutin Barković (Inst. Pharm. Chem., Zagreb). *Acta Pharm. Jugoslav.* 5, 189-93 (1955) (English summary).—*Eth* hydrocupreite (34 g.) was dissolved in a mixt. of 70 cc. H_2SO_4 and 630 cc. water, 4.5 g. MnO_2 was added, the contents heated to boiling, 45 g. CrO_3 in 50 cc. of water added dropwise over 80 min., the mixt. boiled 2 hrs., dild. with 800 cc. water, made alk. with NH_3 , and boiled 1 hr., $Cr(OH)_3$ filtered off, the filtrate acidified with AcOH, and refrigerated, and the crude *6-ethoxyquinoline-4-carboxylic acid* (I) filtered off. The remaining filtrate was partially evapd., and I recovered from the residue in a similar scheme as above. I was dissolved in 10% Na_2CO_3 and, after the addn. of C, the soln. was filtered off, and acidified with AcOH. For further purification, 8 g. I was dissolved in 2 g. of Na_2CO_3 in 80-100 cc. of 70% EtOH on a water bath. The obtained product, after filtration and evapn., was recrystd. from 90% EtOH. Upon addn. of AcOH, platelets of pure I, yellow-green color, m. 205-6° (decompn.), sepd.; I was slightly sol. in water, EtOH, ether, $CHCl_3$, benzene, but more in AcOH. I (11.6 g.) was dissolved in 250 cc. MeOH, 12 cc.

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Barković, Dragutin

coned. H_2SO_4 was added, and the mixt. refluxed 8 hrs. The major portion of MeOH was then distd., water and 10% Na_2CO_3 was added, and the mixt. extd. with ether. The residue, left after the evapn. of ether, was dissolved in gasoline, heated, and filtered. White needlelike crystals (II), the Me ester of I, obtained upon cooling and recrystg. from gasoline, m. 62-3°, were slightly sol. in water, easily in org. solvents, but sparingly in gasoline. II (4.62 g.) was dissolved in 80 cc. of about 70% $N_2H_4.H_2O$ (III) in MeOH, the mixt. boiled 60-90 min., evapd. to about 20 cc., cooled, and filtered to give *6-ethoxyquinoline-4-carboxylic acid hydrazide* (IV), m. 179° (slight decompr.) (from $CHCl_3$ or MeOH) (started to sublime at 120°), easily sol. in MeOH and EtOH, less in $CHCl_3$, sparingly in ether, slightly in water, and not in ligroine. IV (2.31 g.) was dissolved in 50 cc. 96% EtOH at 40°, 50 cc. 5% AcOH and 3 cc. cyclohexanone was added, the mixt. was stirred 30 min., then dild. with 100 cc. of water, and cooled on ice. Upon recrystn. from EtOH, and preferential evapn. *in vacuo*, white rodlike crystals of *1-(6-ethoxy-4-quinolin carbonyl)-2-cyclohexylidenehydrazine*, subliming above 175°, m. 200-2° (decompr.), were obtained. They dissolved easily in $CHCl_3$, MeOH, EtOH, and gasoline and slightly in ether and water. T. Interic
2/2

BARKOVIC, D.

✓ Isonicotinoyl hydrazide and some similar substances.
D. BARKOVIC. Farm. Glasnik 11, 47-55(1955).—A review
of chemistry and pharmacology of isonicotinoyl hydrazide is
given. 33 references. V. Milajlov.

BARKOVIC D.

YUGOSLAVIA/Organic Chemistry. Natural Substances and their
Synthetic Analogues.

G-3

Abs Jour: Ref. Zhur.-Khimiya, No II, 1958, 36350.

Author : Barkovic D., Gasparec Z., Movrin M.(I) Barkovic D.,
Movrin M.(II)

Inst : Not given.

Title : Synthesis of Certain Derivatives of the Quinolincar-
bonic-4-Acid Through Oxidation of Quinine Alkaloids
and of Related Compound with Chromium Trioxide.

I. Synthesis of Quinic Acid. II. Synthesis of 6-
Ethoxyquinolinecarboxylic-4 and 6-Isoamylloxyquinolin-
carboxylic-4 Acids.

Orig Pub: Acta pharmac. jugosl., 1957, 7, No 1, 3-11, No 3, 119-
127.

Abstract: I. In the oxidation of quinine or quinidine with

Card : 1/3

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YUGOSLAVIA/Chemical Technology - Chemical Products and Their
Application. Synthetic and Natural Medicinal Substances. Galenicals and Medicinal Forms. H.

Abs Jour : Ref Zbir - Khimiya, No 10, 1959, 36049

Author : Barkovich, Dr., Gasparec, Zv.

Inst : -
Title : Concerning the Analysis in the Presence in Quinidine
and Its Salts of Other Quinine Alkaloids.

Orig Pub : Farmac. glasnik, 1957, 13, No 2, 51-56.

Abstract : For the indicated analysis, the conditions of the quantitative precipitation of quinidine (I) were examined. It was ascertained that, at pH less than 4, a certain amount of I remains in solution in the form of dihydrate and is precipitated or rendered turbid by the addition to the filtrate of NH₃ or an alkali. It was also found that the most favorable pH is obtained by the addition of CH₃COOM_a to the acid solution after the

Card 1/2

Country	: YUGOSLAVIA
Category	: Organic Chemistry. Synthetic Organic Chemistry
Ref. Num.	: Ref Zhur - Khim., No 5, 1959, No. 15410
Author	: Barkovic, D.; Gasparec, Z.; Movrin, M.
Institute	: -
Title	: Preparation of Certain Derivatives of Quinoline-4-Carboxylic Acid by Oxidation of Quinic Alkaloids and Related Compounds with Chromium
Orig. Pub.	: Acta pharmac. jugosl., 1958, 8, No 2, 51-58
Abstract	: Quinic acid (I), obtained by oxidation of quinine by the method described earlier (see report II, Ref Zhur-Khim, 1958, 36350), can be separated out from the reaction mixture, depending on the conditions, in the form of chromate (Ia) or dichromate (Ib). 5 g. of CrO ₃ or 30 g. of NaCl are added to the reaction mixture
<p>* Triaioxide. III. Preparation of Quinic Acid by Direct Precipitation from an Oxidizing Mixture</p>	
Card:	1/3
G - 54	

Country :	G
Category :	
Abs. Jour :	Ref Zhur - Khim., No 5, 1959, No. 15410
Author :	
Institut. :	
Title :	
Orig. Pub. :	
Abstract cont'd.	: obtained by oxidation of 0.05 mole of quinine, left standing for several days at 0-5° and Ia is separated out, with yield of 60-70%; or, 5 g. of CrO ₃ in 450 ml. of water are added (at 90°) to a solution of 5 g. of I in 50 ml. of 10% H ₂ SO ₄ , left standing at 0-5° and Ia is separated out, with yield of 96.6%. 8 g. of CrO ₃ in 16 ml. of 50% H ₂ SO ₄ are added to the solution of I obtained by oxidation of 0.05 mole of quinine, left standing at 5-6° and Ib is
Card:	2/3

Investigations of the reaction products of colored reactions of organic bases by means of bromine. I. D. Barković and M. Kilić-Cerkovnikov (Fac. Pharm., Zagreb, Yugoslavia). *Acta Pharm. Jugoslav.* 8, 1-7 (1958).—By the action of Br on allyl 2-phenylcinchoninate-HBr triperbromide has been prep'd., orange crystals, m. 103-4°, whereas from Me quininate the respective hydrobromide monoperbromide has been obtained, yellow crystals, m. 145°. Some other perbromides were prep'd. by means of 48% HBr and 30% H₂O₂ soln. The following cryst. perbromides were prep'd.: Et quininate-HBr diperbromide, yellow needles, m. 92-3°; 8-hydroxyquinoline-HBr monoperbromide, orange-yellow crystals, m. 170-80°; 2-methylquinoline-HBr monoperbromide, orange crystals, m. 138-9°; 5-nitroquinoline-HBr monoperbromide, yellow-orange crystals, m. 184°. Amorphous unstable perbromides prep'd. were: 2,3-dibromopropyl 2-phenylcinchoninate-HBr monoperbromide, m. 112-14°; x-bromo-2-hydroxy-4-methylquinoline-HBr monoperbromide, orange, m. 100-3°; 6-ethoxycinchoninic acid-HBr monoperbromide, red, m. 184-00°.

X T. Bičan-Fišter

3
2 - May

YUGOSLAVIA / Chemical Technology, Chemical Products and Their Application. Pharmaceuticals. Vitamins. Antibiotics. H-17

Abs Jour : Rof Zhur - Khimiya, No 5, 1959, No. 16498

Author : Barkovic, D.

Inst : Not given

Title : Identification of Eupavorino

Orig Pub : Farmac. glasnik, 1959, 13, No 11-12, 464-467

Abstract : It has been established that a new preparation - eupavorine (E) - manufactured by Mork does not result in the so-called drop reaction when it comes in contact with filter paper and when admixed with Br₂ vapors in the presence of HCl (acid), as is characteristic for other grades of eupavorine (I) and papaverine. A study of possible uses of color reactions with Br₂ and NH₃ vapors has been conducted. Its main object was the identification of this new preparation and also the

Card 1/2

YUGOSLAVIA / Chemical Technology, Chemical Products and Their Application. Pharmaceuticals. Vitamins. Antibiotics. H-17

Abs Jour : Rof Zhur - Khimiya, No 5, 1959, No. 16498

establishment of different proportions of E from those of I, papaverine, and morphine. Tabulated results of the study are presented.

Card 2/2

H - 52

BARKOVIC, Dragutin

Development and chmistry of sulfonamide diuretics. Farmaceut gl Zagreb 19 no.112407-418 N'63.

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BARKOVIC, Dragutin, dr

Radiomimetic preparations. Farmaceut gl Zagreb 20 no. 1:1-13
Ja '64.

1. Member of the Board of Editors, "Farmaceutski glasnik".

BARKOVICH, T.M., kand. tekhn. nauk; KHEYKER, D.M., inzh.; GRACHEVA, O.I.,
kand. tekhn. nauk; KUPREYEVA, N.I., inzh.

Processes of autoclave hardening of asbestos cement. Trudy
NIIAsbesttsementa no.8:25-65 '58. (MIRA 16:8)

BARKOVITS, Istvan

Cooperation in constructing railroad tracks. Magy vasut & no.17:3
1 S '64.

SUKHORUKOV, K.T.; BARKOVSKAYA, G.Ye.

Consequences of reduced temperatures on the state of enzymes in
plants. Biul.Glav.bot.sada no.16:55-60 '53. (MLRA 7:4)

1. Glavnnyy botanicheskiy sad Akademii nauk SSSR.
(Plants, Effect of temperature on) (Enzymes)

SARATIKOV, A.S.; BARKOVSKAYA, G.Ye.

Effect of camphor on the respiration of brain tissue. Farm.
i toks. 26 no.2:189-192 Mr-Ap '63. (MIRA 17:8)

1. Kafedra farmakologii Tomskogo meditsinskogo instituta.

SARATIKOV, A.S.; MARINA, T.F.; BARKOVSKAYA, G.Ye.

Effect of camphor on the coronary blood flow and on some indices of carbohydrate and oxygen metabolism of the myocardium. Farm. i toks. 25 no.1:77-81 Ja-F '62. (MINA 15:4)

1. Kafedra farmakologii Tomskogo meditsinskogo instituta.
(HEART--MUSCLE) (CORONARY VESSELS)
(CAMPHOR--PHYSIOLOGICAL EFFECT) (CARBOHYDRATE METABOLISM)
(RESPIRATION)

SARATIEV, A.S.; BARKOVSKAYA, G.Ye.; GORSHEKOVA, V.K.

Effect of some enzyme poisons on bile secretion. Biol. eksp. biol.
i med. 54 no.8:56-59 Ag '62. (MIRA 1':11)

1. Iz kafedry farmakologii Tomskogo meditsinskogo instituta. Pred-
stavlena deystvitel'nym chlenom AMN SSSR A.G. Savinykh).

BARKOVSKAYA, K.S.; BEZBORODOV, R.S.; BROD, I.O., prof., doktor geol.-mineral. nauk; BUN'KOV, M.S.; GRINFEL'D, M.I.; ZHIVAGO, N.F.; IBRAGIMOV, D.M.; KUDRYAVTSEV, M.P.; LEONOV, G.P.; MOSKVIN, M.M.; NAZAROV, R.I.; NESMEYANOV, D.V.; NIKOLENKO, V.A.; VYSOTSKIY, I.V., nauchnyy red.; RUSAKOVA, L.Ya., vedushchiy red.; YASHCHURZHINSKAYA, A.B., tekhn.red.

[Geology of the eastern part of the northern slope of the Caucasus]
Geologicheskoe stroenie vostochnoi chasti severnogo sklona Kavkaza.
Pod red. I.O.Broda. Leningrad, Gos.nauchno-tekhn.izd-vo neft. i gorno-toplivnoi lit-ry, Leningr.otd-nie, 1960. 319 p. (Trudy Kompleksnoi IUzhnoi Geologicheskoi Ekspeditsii, no.2). (MIRA 13:11)

1. AN SSSR. Kompleksnaya Yuzhnaya Geologicheskaya Ekspeditsiya, 1956-.
2. Vsesoyuznyy nauchno-issled.institut gazovoy promyshlennosti (for Zhivago, Kudryavtsev). 3. Kafedra istoricheskoy i regional'noy geologii (for Leonov, Moskvin). (Caucasus, Northern--Geology)

SHUYKIN, N.I.; BEL'SKIY, I.F.; BARKOVSKAYA, L.Ya.; DRONOV, V.I.;
ALALYKINA, L.A.

Synthesis of 2,4- and 2,5- dialkylthiophanes. Izv.AN SSSR.-
Otd.khim.nauk no.6:1093-1098 '62. (MIRA 15:8)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR i
Institut organicheskoy khimii Bashkirskogo filiala AN SSSR.
(Thiophene)

L 43008-65 EWT(n)/EPF(c)/EMP(j)/T/EMP(t)/EMP(b) PG-4/Pr-4 IJP(c) JD/RM
ACCESSION NR: AF5008625 S/2933/64/007/000/0058/0060

AUTHORS: Shuykin, N. I.; Bel'skiy, I. F.; Barkovskaya, L. Ya.; Gerasimov, M. M.

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28

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TITLE: Synthesis of some cyclic sulfides

SOURCE: AN SSSR. Bashkirskiy filial. Khimiya seraorganicheskikh soyedineniy, soderzhashchikhsya v neftyakh i nefteproduktakh, v. 7, 1964, 58-60

TOPIC TAGS: sulfide, cyclic group, cyclization, thiophane, organosulfur, furane, sodium sulfide, cyclic sulfide

ABSTRACT: A method for synthesizing 2,3,5-trialkylthiophanes was developed to produce them in quantities sufficient for experimentation with organosulfur compounds at the Institut organiceskoy khimii BashFAN SSSR (Institute of Organic Chemistry BashFAN SSSR). Trialkyl-replaced thiophanes were obtained from trialkyl-replaced tetrahydrofuranes produced by the method proposed by I. F. Bel'skiy and N. I. Shuykin (Izv. AN SSSR, 9, 1956, 1962). Furfural and aliphatic aldehydes and ketones served as the basic substances for the production of trialkyltetrahydrofuranes (yield of 70-90%) by a procedure which is described and illustrated. Tetrahydrofurane homologs were hydrobrominated at 100-120°C to produce thiophanes. Subsequent cyclization with sodium sulfide, and extraction produced new cyclic

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ACCESSION NR: AT5008625

sulfides not previously described. These are shown in Table 1 on the Enclosure. In addition to these, 2,6-dimethylpentamethylenesulfide and 2-ethylpentamethylene-sulfide were also produced. Orig. art. has: 2 formulas and 1 table.

ASSOCIATION: Institut organicheskoy khimii, BashFAN SSSR (Institute of Organic Chemistry, Bashkirskiy Branch, AN SSSR)

SUBMITTED: 00

ENCL: 02

SUB CODE: OC

NO REF SOV: 002

OTHER: 000

Card 2/4

BARKOVSKAYA,M.G.

"Hieroglyphics" and their formation on a strip of a contemporary
beach. Trudy Inst.geol.nauk no.155:151-155 '55. (MLRA 8:10)
(Black Sea--Beaches)

BARKOVSKAYA, M.G.

Distribution of detrital sediment on the Black Sea beaches.
Vest. LGU 14 no.24:11-35 '59. (MIRA 12:12)
(Black Sea region--Rocks, Sedimentary)

BARKOVSKAYA, M.G.

Patterns of the distribution of terrigenous material in the zone
adjoining the water edge at the Soviet coast of the Black Sea.
Trudy Inst. okean. 53:64-94 '61. (MIRA 15:2)
(Black Sea—Coasts)

BARKOVSKAYA, M.G.

Patterns of bottom sediment distribution on the shelf of the Soviet
shore of the Black Sea. Trudy Inst. okean. 53:123-148 '61.

(MIRA 15:2)

(Black Sea--Sedimentation and deposition)(Black Sea--Coasts)

BARKOVSKAYA, M.G.

Some characteristics of the formation of commercial concentrates
of heavy minerals in inland waters. Geol.rud.mestorozh. 5 no.1:
50-64 Ja-F '63. (MIRA 16:3)

1. Institut okeanologii AN SSSR, Moskva.
(Placer deposits)

LITVINOV, M.A.; GIRENKO, V.N.; GOLAND, M.I.; BARKOVSKAYA, N.N.

Application of luminiscence analysis to the study of species
characteristics of microscopic fungi of the genus Aspergillus
Mich. Trudy Bot.inst. Ser.2 no.8:45-48 '53. (MLRA 7:1)
(Fungi, Pathogenic)

YA,
LITVINOV, M.A.; AVERBUKH, S.Ya.; BARKOVSKAYA, N.N.

Experimental research on effective fungicidal mixtures of chemicals
suitable for the impregnation of industrial cork packings. Trudy
Bot. inst. Ser. 2 no. 10:175-178 '56. (MLRA 10:2)
(Fungicides) (Packing (Mechanical engineering))

L 36032-66 EWT(d) IJP(c)
ACC NR: AP6027352

SOURCE CODE: UR/0041/00/010/005/0100/0103

AUTHOR: Barkovskaya, N. V.

ORG: none

TITLE: Boundedness of solutions of "almost" linear differential equations with delayed argument

SOURCE: Ukrainskiy matematicheskiy zhurnal, v. 18, no. 3, 1966, 100-103

TOPIC TAGS: linear differential equation, first boundary problem, linear operator

ABSTRACT: The author considers the boundary value problem

$$\begin{aligned} \frac{du}{dt} - Au(t-a) - \Phi u(t) &= f(t) \quad (0 \leq t < \infty), \\ u(t) &= 0 \quad (t < 0), \quad (a > 0); \end{aligned}$$

where $f(t)$ belongs to the expansion of a real, semibounded space; A is a linear bounded operator; and Φ is a nonlinear operator. A condition is given for the spectrum of A and three conditions for Φ . A theorem is given for the bounded solution of the problem. The theorem is proved by showing series convergence. The author thanks Yu. A. Mitropol'skiy for suggesting the problem and giving advice. Orig. art. has: 9 formulas. JPRS: 36,866

SUB CODE: 12 / SUBM DATE: 21Oct65 / ORIG REF: 006

Card 1/1 12/2000

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0617

BARKOVSKAYA, O.V.

Determining the rate of yolk formation in chicken egg. Fiziol. zhur.
40 no.6:722-726 N-D '54. (MLRA 8:2)

1. Nauchno-issledovatel'skiy biologicheskiy institut pri Rostovskom
Gosudarstvennom universitete im. V.M.Molotova.
(EGG YOLK,
form. rate, determ.)

BARKOVSKAYA, V. Yu.

"Role of the Lymphatic System in the Propagation of Bacteria
and Toxins in Chronic Osteomyelitis of the Lower Extremities."
Sub. 2 Apr 51, Central Inst for the Advanced Training of Physicians.

Dissertations presented for science and engineering degrees in
Moscow during 1951.

SC: Sum. No. 480, 9 May 52

BARKOVSKAYA, V.Yu. (Moskva)

Radioactivity and its medical use. Fel'd. i akush. 21 no.8:38-43
Ag '56. (MLRA 9:10)

(RADIOACTIVITY) (RADIOLOGY, MEDICAL)

BARKOVSKAYA, V.Yu; BALDINA, A.I.

Surgical therapy in nonspecific chronic ulcerative colitis.
Khirurgiia 35 no.2:4-10 F '59. (MIRA 12:5)

1. Iz obshchey i gospital'noy klinikoy kliniki (dir. -
prof. A.N.Velikopetskiy), obshchey i gospital'noy terapevti-
cheskoy kliniki (dir. - prof. Ye.M.Tareyev) sanitarno-gigiyeni-
cheskogo fakul'teta I Moskovskogo ordena Lenina meditsinskogo
instituta imeni I.M.Schenova.

(COLITIS, ULCERATIVE, surgery,
(Rus))

BARKOVSKAYA, V.Yu., kand.med.nauk

Invagination of the stomach simulating its cancerous lesion.
Khirurgiia no.8:133-135 Ag '62. (MIRA 15:8)

1. Iz kliniki obshchey i gospital'noy khirurgii (zav. - prof.
A.N. Velikoretskiy) sanitarno-gigiyenicheskogo fakul'teta I
Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M.
Sechenova.

(STOMACH--HERNIA)

"APPROVED FOR RELEASE: 06/08/2000

CIA-RDP86-00513R000203630001-6

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BARKOVSKIY, A., Engr

USSR/Medicine - Physics, Ultrasonics Oct 51

"Ultrasonic Sounds," A. Barkovskiy, Engr

"Nauka i Tekhn." No 10, p 48

The effect of ultrasound on microorganisms and viruses is being investigated in the USSR. Thus, Kutsyshnikov found that ultrasound in only one sec. considerably reduces the virulence of the virus that produces typhus. Prof Sokolov, et al designed an ultrasonic instrument "defectorscope" for determining faults in metal parts. Faults at a depth of several meters from the surface can be determined by means of this instrument. Prof

213T95

Sokolov also designed an ultrasound microscope with the aid of which various physicochemical processes, the growth of crystals, the movement of microorganisms, etc., can be observed. This device permits magnification and observation of objects imbedded in an opaque medium.

213T95

BARKOVSKIY, A. I.

"Investigation of the Effect of the Technical Condition of Plunger Couples on the Operation of the D-54 Diesel." Cand Tech Sci, Joint Sci Council, All Union Sci Res Inst for the Mechanization of Agriculture and the All Union Sci Res Inst for the Electrification of Agriculture, Moscow, 1955. (KL, No 14, Apr 55)

SO: Sum. No. 704, 2 Nov 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (16).

BARKOVICH, A.I., kand. tekhn. nauk; PAVLENKO, G.T., tank.

Testing the gearbox of the 0,9t class tractor with gear shifting
during operation. Trakt. i sel'khozmash. no. li:13-14 N°65.
(MIRA 18:12)

1. Voronezhskiy sel'skokhozyaystvennyy institut.

BARKOVSKIY, A.N.

Scientific conference on the Udokan Problem. Izv. Sib. otd.
AN SSSR no. 10:151-152 '61. (MIRA 14:12)
(Udokan region--Natural resources)

BARKOVSKIY, B.S.

Losses in electrical machines operating on nonsinusoidal current.
Trudy TEKIZHT 35:85-95 '62. (MIRA 16:8)
(Electric machinery) (Electric power distribution)

YUDIN, N.Ye.; RAKOVSKIY, B.S.; KULIK, V.N.; NIKONOV, Yu.Ye.

Methodology for testing turbogenerators under the conditions
of a traction load. Trudy GMIT 41:5-16 (1978).

Some results of the experimental studies on the effect of
traction load on turbogenerators. Itid.: 11-19

(1978).

LIFANOV, P., otvetstvennyy za vysok, YUSUPOV, G.G., otvet.red.; LIFANOV, P.K., red.; POGREBINSKAYA, K.A., red.; KRAYNYUK, P.K., red.; KHODASEVICH, V.G., red.; KHAMRAYEV, L., red.; BARKOVSKIY, I.I., red. YUGINBURG, S.M., red.; KOGAN, V.S., tekhn.red.

[Economy of Samarkand Province; a statistical manual] Narodnoe khoziaistvo Samarkandskoi oblasti; statisticheskii sbornik. (MIRA 11:9) Samarkand, 1958. 95 p.

1. Samarkand (Province). Oblastnoye statisticheskoye upravleniye (Samarkand Province--Statistics)

MOSHKOV, Sergey Sergeyevich; BARKOVSKIY, I.V., redaktor; MAKRUSHIN, V.A.,
tekhnicheskiy redaktor

[Experimental tasks in physics for secondary schools; textbook
for teachers] Eksperimental'nye zadachi po fizike v srednei
shkole; posobie dlja uchitelei. Leningrad, Gos.uchebno-pedagog.
izd-vo Ministerstva prosveshchenija RSFSR, 1955. 203 p.
(Physics--Experiments) (MLRA 9:2)

KALITKIN, Nikolay Mikhaylovich; BARKOVSKIY, I.V., redaktor; MAKRUSHIN, V.A.,
tekhnicheskiy redaktor

[Methods of teaching computation by abacus in class 5] Metodika
obuchenia vychislenii na schetakh v 5 klasse. Leningrad, Gos.
uchebno-pedagog. izd-vo Ministerstva prosveshcheniya RSFSR, Leni-
gradskoe otd-nie, 1956. 80 p.
(Abacus)

GRIGOR'YEV, Nikolay Ivanovich; BARKOVSKIY, I.V., redaktor; MAKRUSHIN, V.A.,
tekhnicheskiy redaktor

[Inequalities in the algebra course for class 10; a practical manual]
Neravenstva v kurse algebry 10 klasza; metodicheskaja razrabotka.
Leningrad, Gos. uchebno-pedagog. izd-vo Ministerstva prosveshchenija
RSFSR, Leningradskoe otd-nie, 1956. 82 p. (MIRA 9:11)
(Inequalities (Mathematics))

YELIZAROV, Konstantin Nikolayevich; BARKOVSKIY, I.V., redaktev; MARKUSHIN,
V.A., tekhnicheskiy redaktev.

[Basic theory of atomic structure for a secondary school course in
physics; teacher's manual] Osnovy ucheniya o strelenii atoma v kurse
fiziki srednei shkoly; posobie dlia uchitelei. Izd.2-eo, ispr. Lenim-
grad, Gos.uchebno-pedagog. izd-vo Ministerstva presveshcheniya RSFSR,
Leningradskoe std-nie, 1956, 170 p.
(Nuclear physics)

BARKOVSKIY, I.V.

SAVELOVA, Yevgeniya Vasil'yevna; BARKOVSKIY, I.V., redaktor; RAKOVITSKIY, I.G., tekhnicheskiy redaktor.

[Problems in the history of physics and engineering in the physics course of secondary schools] Voprosy istorii fiziki i tekhniki v kurse fiziki srednei shkoly. Leningrad, Gos.uchebno-pedagog. izd-vo M-va prosv. RSFSR, Lening. otd-nie, 1956. 190 p.
(MLRA 10:6)

(Physics--History)

KOMPANIYTS, Petr Andreyevich, prof.; BARKOVSKIY, I.V., red.; LEONT'YEVA,
L.A., tekhn.red.

[Simplest graphic computations for school courses in mathematics;
a teacher's manual] Prosteishie graficheskie raschety v shkol'nom
kurse matematiki; v pomoshch' uchitelju. Leningrad, Gos.uchebno-
pedagog. izd-vo M-va prosv. RSFSR, Leningr. otd-nie, 1957. 58 p.
(Monography (Mathematics)) (MIR 11:3)

BARKOVSKII, I. V.

DEPMAN, Ivan Yakovlevich; BARKOVSKII, I.V., redaktor; LEONT'YEVA, L.A.,
tekhnicheskiy redaktor

[Mathematical induction method] Metod matematicheskoi induktsii;
posobie dlia uchitelia. Leningrad, Gos.uchebno-pedagog. izd-vo
M-va prosv. RSFSR, Leningr. otd-nie, 1957. 70 p. (MLRA 10:8)
(Mathematics--Study and teaching)

NIKISHOVA, Lidiya Ivanovna; BARKOVSKIY, I.V., redaktor; LEONT'YEVA, L.A.,
tekhnicheskiy redaktor

[Practical training in mechanical engineering in grade 8; from the
experience of secondary school teacher] Praktikum po mashinovedeniu
v VIII klasse; iz obyta raboty uchitelia srednei shkoly. Leningrad,
Gos.uchebno-pedagog.izd-vo M-va prosv. RSFSR, Leningr. otde-nie,
1957. 99 p.
(Mechanical engineering--Study and teaching)

BARKOVSKIY, I.V.

RYMKEVICH, Pavel Adamovich; BARKOVSKIY, I.V., redaktor; RAKOVITSKIY, I.G.,
tekhnicheskij redaktor

[Review in physics in the 10th grade; a manual for teachers in
secondary schools] Povtorenie kursa fiziki v 10 klasse v pomoshch'!
uchiteliu srednej shkoly. Izd. 2-oe, perer. i dop. Leningrad, Gos.
uchetno-pedagog.izd-vo M-va prosv. RSFSR, Leningr.otd-nie, 1957.
115 p.

(MLRA 10:9)

(Physics--Study and teaching)

y

BARKOVSKIY, I. V.

SHAKHNO, Konstantin Ustinovich; BARKOVSKIY, I. V., red.; LEONT'YEVA, L. A., tekhn.red.; BOL'SHAKOV, V. A., tekhn.red.

[Handbook on mathematics; textbook for students in grades 8-10]
Spravochnik po matematike; posobie dlja uchashchikhsia 8-10 kl.
Leningrad, Gos. uchebno-pedagog. izd-vo M-va prosv. RSFSR, 1957.
214 p.
(Mathematics--Study and teaching)

BARKOVSKIY, I. V.

DEM'KOVICH, Venedikt Perfir'yevich; BARKOVSKIY, I.V., red.; BOL'SHAKOV, V.A.,
tekhn.red.

[Collection of problems in physics for grades 8-10 in secondary
schools; a manual for teachers] Sbornik zadach po fizike dlja 8-10-kh
klassov srednei shkoly; posobie dlja uchitelei. Leningrad, Gos.
uchebno-pedagog. izd-vo M-va prosv. RSFSR, Leningr. otd-nie, 1957.
245 p.

(MIRA 11:5)

(Physics--Problems, exercises, etc.)

BARKOVSKIY, I.V.

CHULANOVSKIY, V.M., professor, otvetstvennyy redaktor; BARKOVSKIY, I.V.,
redaktor; VODOLAGINA, S.D., tekhnicheskiy redaktor.

[Application of methods of spectroscopy to processed foodstruffs
and in agriculture; papers of a conference held in Leningrad July
4 - 7, 1955] Primenenie metodov spektroskopii v promyshlennosti
prodovol'stvennykh tovarov i sel'skom khoziaistve; materialy sove-
shchaniya, sostoiavshegosya v Leningrade 4 -7 iulija 1955 g. [Lenin-
grad] 1957. 263 p. (MLRA 10:5)

1. Leningrad. Universitet.
(Spectrum analysis)

BARKOVSKIY, I. V.

YELIZAROV, Konstantin Nikolayevich; BARKOVSKIY, I.V., red.; LEONT'YEVA, L.A.,
tekhn.red.

[Alternating current in the physics course for secondary schools;
a manual for teachers] Peremennyi tok v kurse fiziki srednei
shkoly; posobie dlja ucheitelei. Leningrad, Gos. uchebno-
pedagog. izd-vo M-va prosv. RSFSR, Leningradskoe ot-nie, 1957.
276 p.

(MIRA 11:4)

(Electric currents, Alternating)

RYMKEVICH, Pavel Adamovich, prof.; YEMEL'YANOV, Fedor Semenovich,; RYMKEVICH,
Andrey Pavlovich,; SHVAYCHENKO, Ivan Markovich, [deceased],;
BARKOVSKIY, I. V., red.; BOL'SHAKOV, V.A., tekhn. red.

[Collection of problems and questions in physics for grades 8 to
10 of secondary schools] Sbornik zadach i voprosov po fizike dlia
8-10 klassov srednei shkoly. Leningrad, Gos. uchebno-pedagog. izd-vo
M-va prosv. RSFSR, Leningra. otd-nie, 1957. 294 p. (MIRA 11:12)
(Physics--Problems, exercises,etc.)

VVEDENSKIY, A.A., otv.red.; MOLDAVSKIY, B.L., nauchnyy red.; BARKOVSKIY, I.V., vedushchiy red.; ALEKSEYEVA, K.A., red.; GADASKINA, N.D., red.; DEMENT'YEVA, M.I., red.; KAGANOVA, E.M., red.; KOBELEV, V.A., red.; LEVIN, S.Z., red.; POKORSKIY, V.N., red.; TEODOROVICH, V.P., red.; SHMULYAKOVSKIY, Ya.E., red.; GENNAD'YEVA, I.M., tekhn.red.

[Collection of reports of scientific research carried out between 1950 and 1957] Sbornik referatov nauchno-issledovatel'skikh rabot, vypolnennykh v 1950-1957 gg. Leningrad, Gos.nauchno-tekhn. izd-vo neft. i gorno-toplivnoi lit-ry, leningr. otd-nie, 1958.
158 p.

(MIRA 12:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke nefti i polucheniyu ikusstvennogo zhidkogo topliva.
(Petroleum research)

KERAMOV, Aleksey Nikitich; YANOVSKIY, B.M.,red.; BARKOVSKIY, I.V.,
vedushchiy red.; GENNAD'YEVA, I.M.,tekhn.red.

[Paleomagnetic correlation of sedimentary formations] Paleo-
magnitnaia korreliatsia osadochnykh tolshch. Leningrad, Gos.
nauchn.tekhn.izd-vo neft. i gorno-toplivnoi lit-ry, 1958. 218 p.
(Leningrad. Vsesoiuznyi neftianoi nauchno-issledovatel'skii
geologo-rasvedochnyi institut. Trudy, no.116) (MIRA 11:12)
(Geology, Stratigraphic) (Magnetism, Terrestrial)
(Rocks, Sedimentary)

Barkovskiy I. V.

MARAMZIN, Aleksandr Vasil'yevich; SHAMSHEV, F.A., doktor tekhn.nauk, prof., nauchnyy red.; BARKOVSKIY, I.V., vedushchiy red.; YASHCHURZHINSKAYA, A.B., tekhn.red.

[Drilling wells in the Far North (in permafrost)] Burenie skvazhin v usloviakh Krainego Severa (v mnogoletnei merzloty). Leningrad, Gos.nauchno-tekhn.izd-vo neft. i gorno-toplivnoi lit-ry, Leningr. otd-nie, 1959. 209 p. (MIRA 12:4)

(Boring)

DEMEN'T'Yeva, Marianna Ivanovna; MOLDAVSKIY, B.L., nauchnyy red.;
BARKOVSKIY, I.V., vedushchiy red.; YASHCHURZHINSKAYA, A.B.,
tekhn.red.

[Analysis of hydrocarbon gases] Analiz uglevodородных газов.
Izd.3., ispr. i dop. Leningrad, Gos.nauchno-tekhn.izd-vo neft.
i gorno-toplivnoi lit-ry, Leningr.otd-nie, 1959. 375 p.
(MIRA 12:10)
(Hydrocarbons--Analysis) (Gases--Analysis)

"APPROVED FOR RELEASE: 06/08/2000

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APPROVED FOR RELEASE: 06/08/2000

CIA-RDP86-00513R000203630001-6"

BARON, I.I., doktor tekhn. nauch; KLYUCHNIKOV, A.V., inzh.

Basic parameters of smooth blasting depending on the breakability
and fractured state of rocks. Vzryv. delo no.57/14.12.1.282 '65.
(MLR. 18.11)

1. Institut gornogo delaniyeni Skochinskogo (for Baron).
2. Kol'skiy filial AN SSSR (for Klyuchnikov).

L 63552-65 EWT(1)/EEC(b)-2/T Pi-4 IJP(c) GG

ACCESSION NR: AP5018849

UR/0368/65/003/001/0083/0091
537.228.3

31

B

AUTHOR: Fedorov, F. I.; Barkovskiy, L. M.

TITLE: Phenomenological theory of linear electrooptical effects in uniaxial crystals

21

SOURCE: Zhurnal prikladnoy spektroskopii, v. 3, no. 1, 1965, 83-91

TOPIC TAGS: uniaxial crystal, crystallography, electrooptical effect, refraction index, nonlinear optics, KDP, ADP, Pockels effect, Kerr effect

ABSTRACT: The linear electrooptical effects in uniaxial crystals are examined by means of direct tensor methods developed by the authors (Optika i spektroskopiya, v. 18, 1965, p. 1047) for the induced optical anisotropic effects in uniaxial crystals. Covariant expressions are given for biradials and beam refraction indices. A general relationship is established between parameters of nonlinear optical polarizability and the electrooptical constant of the crystal. Results are applied to uniaxial crystal sections of ADP, KDP, and quartz, which are often used for the modulation of light. Induced phase differences between light waves propagated in such crystals are found. Orig. art. has: 46 formulas. [CS]

Cord 1/2

L 63552-65

ACCESSION NR: AP5018849

ASSOCIATION: none

SUBMITTED: 03Ju164

ENCL: 00

SUB CODE: SSOP

NO REF SOV: 005

OTHER: 009

ATD PRESS: 4050

Card 2/2

BARKOVSKIY, L.M.; FEDOROV, F.I.

Covariant form of the dielectric tensor in crystals of higher
and medium syngony under vector action. Kristallografiia 10
no.2:174-180 Mr-Ap '65. (MIRA 18:7)

1. Belorusskiy gosudarstvennyy universitet imeni V.I. Lenina.

BARKOVSKIY, L.M.; FEDOROV, F.I.

Phase relations in light modulation with the aid of the
linear electro-optical effect. Zhur. prikl. spektr. 3
no.5:449-455 N '65. (MIRA 18:11)

L 15201-66 EWT(d)/EWT(1)/EEC(k)-2

ACC NR: AP6000025

SOURCE CODE: UR/0368/65/003/005/0449/0455

54

B

AUTHOR: Barkovskiy, L. M.; Fedorov, F. I.

ORG: none

TITLE: Phase relationships in light modulation by means of the linear electrooptic effect

SOURCE: Zhurnal prikladnoy spektroskopii, v. 3, no. 5, 1965, 449-455

TOPIC TAGS: electrooptic effect, light modulation, optic crystal, uniaxial crystal, light polarization, crystal orientation, light modulator

Z1, 44, 55

ABSTRACT: The authors employ the covariant method in the case of the linear electrooptic effect to study the phase relationships between light waves of arbitrary direction of the electric field and light waves normal to symmetry elements in any crystal in an average system. General expressions are found for the phases of both light waves propagating in a direction in uniaxial electrooptic crystals located in a linearly polarized high frequency field of arbitrary direction. The expressions presented in this article and elsewhere (ZhPS, 3, 83, 1965) make possible the most general investigation of the phase, amplitude, and polarization modulation of light by means of electrooptic modulators. Orig. art. has: 18 formulas.

SUB CODE: 20 / SUBM DATE: 16Dec64 / ORIG REF: 003 / OTH REF: 007

TS
Card 1/1

UDC: 535.89

L 2822-66 EWT(1)/T IJP(c) GG

ACCESSION NR: AP5016178

UR/0051/65/018/006/1047/1052
548.0:535.001.1

AUTHOR: Fedorov, F. I.; Barkovskiy, L. M.

TITLE: Stimulated optical anisotropy of transparent uniaxial crystals

SOURCE: Optika i spektroskopiya, v. 18, no. 6, 1965, 1047-1052

TOPIC TAGS: crystal anisotropy, dielectric constant, uniaxial crystal, tensor, refractive index, light transmission

ABSTRACT: The authors develop in covariant form an approximate theory for the propagation of light in transparent uniaxial crystals subjected to external orienting action of arbitrary character. The eigenvalues and the eigenvectors of the dielectric constant tensor of such crystals are determined. General expressions are derived for the refractive indices and for the orientations of the field vectors of the light waves propagating in the crystal under these conditions. The results are independent of the cause of the stimulated anisotropy, provided the change in the dielectric tensor is symmetrical. Orig. art. has: 45 formulas.

ASSOCIATION: None

Card 1/2

L 2322-66

ACCESSION NR: AP5016178

SUBMITTED: 20Jan64

ENCL: 00

SUB CODE: SS, QP

NO REF SOV: 004

OTHER: 000

CC
Card 2/2

L 22104-66 EWT(d) IJP(c)

ACC NR: AP6012943

SOURCE CODE: UR/0070/65/010/002/0174/0180

AUTHOR: Barkovskiy, L. M.

38

B

ORG: Belorussian State University im. V. I. Lenin (Belorusskiy gosudarstvennyy universitet)

TITLE: Covariant form of a dielectric tensor in higher and middle crystal systems with vector influence

SOURCE: Kristallografiya, v. 10, no. 2, 1965, 174-180

TOPIC TAGS: tensor, dielectrics, vector, electrooptic effect, frequency doubling

ABSTRACT: The authors find the covariant form of tensors of the third rank characterizing the variation of dielectric tensor with an arbitrary vector influence on all classes of higher and middle crystal systems. The relations obtained enable them to use direct tensor methods for a general study of a number of effects: linear electrooptical, frequency doubling, and the dc-effect. Orig. art. has: 48 formulas and 1 table. [JPRS]

SUB CODE: 20 / SUBM DATE: 08Jun64 / ORIG REF: 009 / OTH REF: 002

Card 1/1

UDC: 548.0: 537,226

ACC NR: AP7004541

SOURCE CODE: UR/0368/66/005/003/0371/0380

AUTHOR: Fedorov, F. I.; Barkovskiy, L. M.

JRG: none

TITLE: Theory of the linear electrooptical effect in cubic crystals

SOURCE: Zhurnal prikladnoy spektroskopii, v. 5, no. 3, 1966, 371-380

TOPIC TAGS: cubic crystal, electrooptic effect, eigenvalue

ABSTRACT: An approximation covariant method is applied to the study of the linear electrooptical effect in cubic crystals of aconic classes. For any direction of the electric field in these crystals, simple analytical expressions are obtained for the induced optical axes and for eigenvalues and eigenvectors of the inverse dielectric tensor. The method enables one to find these quantities with a high degree of precision. The cases when the electrical field rotates in the planes orthogonal to the crystallographic directions and in the symmetry planes of the crystals are considered in detail.

[Based on author's English Abstract] Orig. art. has: 2 figures and 48 formulas. [JPRS: 38,695]

SUB CODE: 20 / SUBM DATE: 28Aug65 / ORIG REF: 005 / OTH REF: 004

Card 1/1

UDC: 537.228.3

1367

ACC NR: AP6032961

SOURCE CODE: UR/0070/66/011/005/0766/0770

AUTHOR: Fedorov, F. I.; Barkovskiy, L. M.

ORG: Belorussian State University (Belorusskiy gosudarstvenny universitet)

TITLE: Effects of stimulated optical anisotropy in biaxial crystals

SOURCE: Kristallografiya, v. 11, no. 5, 1966, 766-770

TOPIC TAGS: optic crystal, crystal property, dielectric constant, tensor, electrooptic effect, piezoelectricity

ABSTRACT: This is a continuation of earlier work (Optika i spektroskopiya v. 18, 1047, 1965), where a simple method was proposed for approximately determining the parameters of the reciprocal dielectric tensor of a transparent uniaxial crystal under the influence of an external action. The present paper is devoted to a similar problem for the case of a biaxial crystal. A covariant method is used, in which the changes to the tensor are determined in the form of small increments to the initial values of its components. It is assumed that the natural anisotropy of the crystal is much larger than the artificial anisotropy produced by the external action. The method yields the directions of the optical axes and the principal values of the dielectric tensor for the disturbed crystal. The method is also used to determine the linear electrooptic effect in a Rochelle salt crystal. Covariant expressions are pre-

Card 1/2

UDC: 548.0:535.34

ACC NR: AP6032961

sented for the tensor of the electrooptic constants in biaxial crystals. An interesting result in the case of Rochelle salt is that the scattering indicatrix is rotated as a whole under the influence of an external field of arbitrary direction, without changing forms and dimensions. Orig. art. has: 18 formulas a 1 table.

SUB CODE: 20/ SUBM DATE: 23Mar65/ ORIG REF: 008/ OTH REF: 003

Card 2/2

BARKOVSKIY, M.A.

Selection of a standard massecuite mixer for the sugar industry.
Sakh.prom. 30 no.8:27-31 Ag. '56. (MLRA 9:11)

1. Ministerstvo promyshlennosti prodovol'stvennykh tovarov SSSR.
(Mixing machinery) (Sugar industry--Equipment and supplies)

BARKOVSKIY, M.A.

Standards for technical planning. Sakh.prom. 30 no.10:25-26 O '56.
(MIRA 10:1)

1. Ministerstvo promyshlennosti prodovol'stvennykh tovarov SSSR.
(Sugar industry)

BARKOVSKIY, M.A., inzh.

Rapid assembling of water-power engineering equipment at large
multiunit hydroelectric power stations. Gidr.stroi. 30 no.2:
7-12 F '60. (MIRA 13:5)
(Hydroelectric power station--Equipment and supplies)

BARKOVSKIY, N.

Economy and finance of the Republic of Guinea. Den. i kred. 18
no.9:75-85 S '60. (MIRA 13:8)
(Guinea—Economic conditions) (Guinea—Finance)

BARKOVSKIY, N.

Stimulate the role of credit in developing the national economy.
Den. i kred. 19 no. 10 13-10 0 '61. (MIRA 14:10)
(Credit)

BARKOVSKIY, N.

The new procedure for issuing credit and making payments in
operation. Den. i kred. 21 no.6:3-11 Je '63. (MIRA 16:8)
(Credit) (Payment)

BARKOVSKIY, N.

Credits for capital assets. Den. i kred. 21 no.10:3-11 0 '63.
(MIRA 16:10)

BARKOVSKIY, N.A.

Telecommunication equipment for the duty stationmaster.
Avtom. telem. i sviaz' 3 no.5:33-34 My '59. (MIRA 12:8)

1. Nachal'nik 3-y distantsii radiosvyazi Severnoy dorogi.
(Railroads--Communication systems)

BARKOVSKIY, N.A.

Radio electronics and automatic control are serving passengers.
Avtom. telem. i sviaz' 3 no.11:17-19 N '59 (MIRA 13:3)

1. Nachal'nik Moskovsko-Yaroslavskoy distantsii signalizatsii i
svyazi Moskovskoy dorogi.
(Railroads--Electronic equipment)

BARKOVSKIY, N.

Maintain strict adherence to credit discipline. Den. i kred. 17
no. 5:20-29 May '59. (AIRA 12:10)
(Credit)

MARKOV, Viktor Andreyevich; BARKOVSKIY, N., otv.red.; BOROZDIN, B.,
red.izd-va; LEBEDEV, A., tekhn.red.

[Issuing credit for new machinery] Kredit na novuiu tekhniku.
Moskva, Gosfinizdat, 1960. 82 p. (MIRA 14:3)
(Machinery in industry) (Credit)

BARKOVSKIY, N.A., inzh.; PODKOPAYEV, I.A., inzh.

Television in the classification yards. Zhel.dor. transp. 43 no.5:
63-65 My '61. (MIRA 14:4)

1. Nachal'nik distantsii signalizatsii i svyazi stantsii Losino-
ostrovskaya (for Barkovskiy). 2. Glavnnyy inzhener stantsii
Losinoostrovskaya (for Podkopayev).

(Industrial television) (Railroads--Hump yards)

BARKOVSKIY, N. D.

34050. Chire ispol'zovat' bankovskie kredity na proverenie maloy
mekhanizatsii, ryb. khoz-vo, 1939, No. III, s. 10-13

36: Knizhnyaya, letopis', Vol. 2, 1939

BARKOVSKIY, N.

Food Industry and Trade

Reciprocal clearing in food-stuffs industry. Dan. i kred. No. 1, 1952

Monthly List of Russian Accessions, Library of Congress, March 1952. Unclassified.

BARKOVSKY, V.

Food Industry - Finance

Soviet bank control in food industry. Fin. i kred. CCCP No. 1, 1953.

9. Monthly List of Russian Accessions, Library of Congress, June 1953. Unclassified.

BARKOVSKIY, N.

Bank credit and small-scale mechanization of production. Fin.i kred.
SSSR no.6:37-41 Je '53. (MLRA 6:6)
(Banks and banking) (Machinery in industry)